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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,103	11/21/2003	Jang-Kun Song	AB-1346 US	1943
32605	7590	10/12/2006	EXAMINER	
MACPHERSON KWOK CHEN & HEID LLP			BRIGGS, NATHANAEL R	
2033 GATEWAY PLACE			ART UNIT	
SUITE 400			PAPER NUMBER	
SAN JOSE, CA 95110			2871	

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/719,103

Applicant(s)

SONG, JANG-KUN

Examiner

Nathanael Briggs

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17, 31 and 32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17, 31 and 32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 14, 2006 has been entered.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 31, and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Miyazaki et al. (US 5,969,784).

4. Regarding claim 1, Miyazaki discloses an LCD apparatus (see figures 3 and 11(c), for instance) having a first panel (10) including: a first transparent substrate (1) having a pixel area (13); a thin film transistor (31) disposed at the pixel area so as to

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output a pixel voltage; a color filter (2R, 2G, 2B) disposed at the pixel area; a spacer (3B, 3G, 3R) disposed on an overlapped area between the color filter (2G) and an adjacent color filter (2R), the spacer (3B, 3G, 3R) having a same material as the color filter (2R, column 11, lines 1-15); and a pixel electrode (13) disposed on the color filter (3B, 3G, 3R ) so as to receive the pixel voltage; a second panel (50) including: a second transparent substrate (11); and a common electrode (65) disposed on the second transparent substrate (11), and a liquid crystal layer (7) disposed between the first (10) and second (50) panels. Claim 2 is therefore unpatentable.

5. Regarding claim 2, Miyazaki discloses the LCD apparatus of claim 1 (see figures 3 and 11(c), for instance), where the color filter (2G, 2R, 2B) a red, green, and a blue color filter (R, G, B) and the spacer comprises at least one of a red, green, and blue filter (3G, 3R, 3B). Claim 2 is therefore unpatentable.

6. Regarding claims 31 and 32, Miyazaki discloses the LCD apparatus of claim 1 (see figures 3 and 11(c), for instance), wherein the spacer (3B, 3R, 3G) has a column shape, the spacer (3B, 3R, 3G) being configured to maintain a cell gap between the first substrate (1) and the second substrate (11). Claim 31 is therefore unpatentable.

7. Regarding claim 32, Miyazaki discloses the LCD apparatus of claim 1 (see figures 3 and 11(c), for instance), wherein the common electrode (65) makes direct contact with the spacer (3B, 3R, 3G). Claim 32 is therefore unpatentable.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**9. Claims 3, 5, 7, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al. (US 5,969,784, hereafter Miyazaki (a)) in view of Miyazaki et al. (US 5,757,451, hereafter Miyazaki (b)).**

10. Regarding claims 3, 5, 7, and 9, Miyazaki (a) discloses the LCD of claim 1 (see figures 3 and 11(c), for instance) including a light blocking pattern (4) in the form of a lattice-shape of a photo-sensitive pattern (column 6, lines 25-34), where the pattern blocks light incident between the pixel area (13) and the adjacent pixel. However, Miyazaki (a) does not expressly disclose wherein the light-blocking pattern is disposed on the second panel on the common electrode.

11. Regarding claims 3, 5, 7, and 9, Miyazaki (b) discloses an LCD (see figure 1, for instance) where the second panel comprises a light-blocking pattern (36) having a lattice-shape (column 5, lines 2-3) of a photo-sensitive pattern (column 11, lines 21-25) disposed on the common electrode (34), where the pattern blocks light incident between the pixel area and the adjacent pixel.

12. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the light-blocking pattern of Miyazaki (b) in the LCD of Miyazaki (a). The motivation for doing so would have been to build an inexpensive color display of high quality and high yield using stacked color filters as spacers, as exemplified by the LCD of Miyazaki (b) (column 2, lines 48-53). Claims 3, 5, 7, and 9 are therefore unpatentable.

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**13. Claims 4, 6, 8, 10-11, 13, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki (a) (US 5,969,784) in view of Miyazaki (b) et al. (US 5,757,451) as applied to claims 3, 5, 7, and 9 above, and further in view of Yamada (US 6,140,988).**

14. Regarding claims 4, 6, 8, 10-11, 13, and 15, Miyazaki (a) in view of Miyazaki (b) discloses the LCD of claims 1 and 2 (see Miyazaki (a) figures 3 and 11(c) and Miyazaki (b) figure 1, for instance), and Miyazaki (a) discloses wherein the LCD has a liquid crystal layer (7) and light visual pattern on the common electrode (65). However, the references fail to specifically disclose the liquid crystal molecules being vertically aligned.

15. Yamada discloses an LCD apparatus where the liquid crystal molecules being vertically aligned (col. 1, lines 29-39).

16. It would have been obvious to one of ordinary skill in the art at the time of the invention to have the liquid crystal molecules being vertically aligned since one would be motivated to provide a display apparatus with high contrast and outstanding viewing angle characteristics (col. 1, lines 39-45). Claims 4, 6, 8, 10-11, 13, and 15 are therefore unpatentable.

**17. Claims 12, 14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki (a) (US 5,969,784) in view of Miyazaki (b) et al. (US 5,757,451) and further in view of Yamada (US 6,140,988) as applied to claims 4, 6, 8, 10-11, 13, and 15 above, and further in view of Iida et al. (US 5,801,797).**

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18. Regarding claims 12, 14, and 16, Miyazaki (a) in view of Miyazaki (b) and in further view of Yamada discloses the LCD as recited above (see Miyazaki (a) figures 3 and 11(c), Miyazaki (b) figure 1, for instance). However, the references fail to specifically disclose the second panel further comprising transparent spacers disposed on the common electrode.

19. Iida discloses an LCD device having spacers made of transparent resin (col. 13, lines 52).

20. It would have been obvious to one of ordinary skill in the art at the time of the invention to have the second substrate further comprising transparent spacers disposed on the common electrode since one would have been motivated to provide a display having a large display area in which no display-impossible region is formed (col. 13, lines 55-59). Claims 12, 14, and 16 are therefore unpatentable.

### ***Response to Arguments***

21. Applicant's arguments with respect to claims 1-17 and 31-32 have been considered but are moot in view of the new ground(s) of rejection.


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathanael Briggs whose telephone number is (571) 272-8992. The examiner can normally be reached on 8:30 AM to 5:00 PM (EST) Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nathanael Briggs  
10/2/2006

  
ANDREW SCHECHTER  
PRIMARY EXAMINER